

REMARKS

Claims 1-3, 5-15, and 19 are pending in the application. By this Amendment, claims 1 and 19 have been amended. Support for the amendment to independent claim 1 is found at least at original claims 17 and 18. No new matter has been added.

Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Claim 19 has been amended to obviate this rejection.

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

Claim 19 has been amended to obviate this rejection.

Claims 1-5 and 16-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over WO 97/38048 to Kaneka Corporation, as evidenced by U.S. Patent No. 6,596,782, to Mogami et al., which is a counterpart thereof.

Claim 1 has been amended to recite open-celled foam beads having a proportion of open cells of greater than 75%. In addition, claim 1 has been amended to recite that the mean cell diameter is from 0.05 to 0.3 mm. At least these features of independent claim 1 cannot reasonably be considered to be suggested in Mogami.

Open-celled foam beads in accordance with claim 1 are now even more clearly distinct from comparative example 7 of Mogami, which is relied on by the Office Action, due to a significant higher proportion of open cells and a greater mean cell diameter of the former.

Mogami suggests, at col. 3, lines 35 to 42, a water-containing polyolefin resin composition for obtaining pre-expanded particles without further impregnation with a blowing agent. As set forth at col. 8, line 64 to col. 9, line 2, of Mogami, the hydrophilic polymer is used to adjust the water content. Therefore, Mogami is limited to this specific process for preparing

pre-expanded particles of a polyolefin resin without using a volatile blowing agent. See also claim 1 in Mogami.

In contrast hereto, the open-celled foam beads according to claim 1 are prepared by using an volatile blowing agent, such as butane or pentane. See page 3, lines 30 to 38.

As set forth at page 1, lines 31 to 34 of Applicants' disclosure, open-celled plastic foams are generally more elastic than closed-cell foams and have a sound-insulation action, which is advantageous, for example for automobile interior trim. Sound-insulation is not addressed as a suitable use in Mogami at col. 15, lines 45 to 61.

Moreover, there is no specific suggestion regarding the purposive preparation and desired properties of open-celled foam beads in Mogami. Comparative Example 7 has an average cell diameter of 20 μm , which is less than 50 μm . Thus, the shape of the molded article obtained in Mogami should be distorted, as described at col. 9, lines 26 to 32.

Applicants note that Comparative Example 7 in Mogami has an open cell content of 37%, which is very remote from a proportion of open cells being greater than 75%, as recited in claim 1.

For Comparative Example 6 the same amount of hydrophilic polymer and filler is used as in Comparative Example 7, but the open cell ratio is substantially different. Aside from the different closed cell content, the physical properties of the molded articles are identical, as set forth in Table 2 of Mogami. From this data, a person skilled in the art would not derive any specific suggestion to vary the closed cell content.

In addition, Applicants respectfully disagree with the assertion at page 6, lines 5-9, of the Office Action that a low heat resistance is a highly sought after property for thermally conductive materials. Moreover, the Office Action fails to provide support for the assertion that modifying materials to have a lower heat resistance increases the thermal conductivity of these materials.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mogami in view of US Patent No. 6,077,875 to Sasaki et al.

The Office Action relies on Sasaki for suggesting a material having two peaks in the DSC thermogram. Sasaki suggests expanded beads of a polypropylene resin, which can be molded with lower-pressure steam. Sasaki fails to suggest the open cell content of the expanded beads or the use of any cell opener. Further, as set forth at col. 8, lines 49 to 57, Sasaki suggests that the foamed polypropylene beads are prepared by using a volatile foaming agent. As noted above, Mogami does not suggest the preparation of pre-expanded particles without the use of foaming agents. Accordingly, a person skilled in the art would not combine Mogami and Sasaki because Mogami is limited to preparing particles without foaming and Sasaki is limited to preparing foams with a foaming agent, which cannot be done simultaneously.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Applicants concurrently herewith submit the requisite fee for a Request for Continued Examination and a Petition for a one-month Extension of Time. Applicants believe no additional fee is due with this response. However, if any such additional fee is due, please charge our Deposit Account No. 22-0185, under Order No. 12810-00007-US from which the undersigned is authorized to draw.

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Respectfully submitted,

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